

Things to Know, Understand and Do For Chapters 7 & 8: Shapes of Molecules and Intermolecular Forces

By the end of Chapter 6, you should

Know how to...
Define the terms chemical bond, covalent bond, ionic bond, polarity, dipole, hydrogen bonds, , intermolecular force.
Predict if compound is ionic or covalent only using periodic trends of electronegativities as outlined on the periodic table.
Use electronegativity trends (outlined on periodic table) to determine if bond is polar-covalent, non- polar covalent or ionic. (even or uneven electron sharing)
Draw Lewis Structures for small molecules and ions.
Use VSEPR (valence shell electron-pair repulsion theory) to explain the molecular geometry and bond angles of molecules or ions.
Predict bond angles for any angle on a given molecule or ion.
Use molecular geometry and bond dipoles to predict molecular polarity.
Define the two different types of intermolecular forces and rank them by their strengths of attractions.

understand...
The basic trends in how many bonds elements form, along with how many unshared electron pairs they have.
Why some molecules are non-polar or polar.
How intermolecular forces can affect the properties of compounds.
That intermolecular forces are just forces of attraction and they are NOT bonds.

Ch 7 & 8 Homework

Due the day before the test. Must be completed neatly. Use full sentences and/or show all work in calculations for full credit where applicable. This assignment may be passed in anytime before the test though. Students may also elect to pass in questions in smaller chunks during the course of our coverage of the chapter if that is more conducive to their learning style.

Read the following pages in chapters 7 & 8: (p 191-199, p 215 – 233)

Do the following problems:

pg 195 Q 4, 7, 8 (Draw Lewis Structures for these problems)
 pg 199 Q 3, 6
 pg 212 Q 2, 3
 pg 217 Q 1, 2
 pg 226 Q 1, 3, 4
 pg 229 Q 3, 4
 pg 233 Q 3, 4 (ignore the smell part to these questions)
 pg 239 Q 1, 3, 4 (a-c)